

II. REMARKS

In the most recent Office Action the Examiner again rejected Claims 3-14 under the 35 U.S.C. § 112, first paragraph, stating that it was unclear how a receiver such as a Polar heart rate monitor could determine the intensity of the signal. He then rejected Claims 3-14 as being anticipated by Huish et al. or Trulaske. Finally, he rejected Claims 3-14 as being obvious over Huish or Trulaske in view of Shyu and also over Potash in view of Huish or Trulaske. By this response Applicant has amended Claims 3, 6, 7, 8, 10, and 12 and also has added new claims 15 and 16 for examination.

In his rejections based on the prior art the Examiner first contended that Claims 3-14 are anticipated by Huish or Trulaske. Particularly he has alleged that each of those references show all of Applicant's claimed structure including a heart rate monitor which transmits data to a microprocessor on the treadmill and control means which adjusts the speed and inclination of the treadmill in response to the signal (see Huish, column 3 at line 16 and column 4 at line 9; Trulaske, column 6 at line 39 and column 7 at line 8). Applicant agrees that Huish, Trulaske and the present application all teach the control of a treadmill in response to a "signal" from a transmitter such as a heart rate monitor. Importantly, however, they each differ in the particular means by which that control is accomplished. Huish and Trulaske teach use of a means to detect the user's heart rate and means responsive to that heart rate to accomplish the control. The present invention according to claims 3-8, 10 and 12-16 is distinguished from each of these references in that it includes (1) means for detecting the field strength of the signal; and (2) means for producing a control signal responsive to the field strength of the signal. Neither

Huish, Trulaske, or any of the other references cited by the Examiner disclose or suggest such means.

The Examiner has also argued that when a user is beyond the range of the receiver, no signal is received, and therefore the receiver is inherently responsive to the position of the user on the endless belt. The Examiner should note that this argument was obviated by Applicant's amendments of June 13, 2002, to the claims and so is not applicable to the current claims. Moreover, the claims now require that the receiver be "within the operating range" of the transmitter.

The Examiner has further argued that Claims 3-14 are obvious over either Huish or Trulaske in view of Shyu. Shyu discloses means for detecting the position of a user on a treadmill including a transmitter for transmitting an ultrasonic wave toward the user and a receiver for detecting the wave when it is reflected from the chest of the user. He also discloses means for adjusting the speed of the endless belt in response to the computed position of the user on the belt in order to maintain the user's position within a desired range (see Shyu, col. 3 beginning on line 42). Nowhere does Shyu disclose or suggest means for detecting the field strength of the transmitted wave or means for producing a control signal responsive to the field strength. Accordingly, Applicant disagrees with the Examiner's conclusion that invention according to Claims 3-14 would be obvious in view of any combination of the teachings of Huish, Trulaske, and/or Shyu.

Finally, the Examiner has contended that Claims 3-14 would be obvious over Potash in view of Huish or Trulaske. The adaptive treadmill disclosed by Potash is similar to the Shyu treadmill in that it uses information from an ultrasonic transmitter/receiver fixedly mounted to the treadmill frame to calculate the position of the user on the treadmill and means responsive to this position information for the varying speed of the treadmill in order to maintain the user in a predetermined position on the belt (see Potash, column 6 at lines 1-65). Moreover, Potash includes means for determining the rate of change of the user's position with respect to that predetermined position and to modify the control signal so as to anticipate the distances which will be traversed by the user (see Potash beginning at column 7 at line 11.) However, there are no teachings in Potash, Huish or Trulaske that would disclose or suggest a treadmill according to any of the claims herein submitted. Specifically there is no suggestion of any means for detecting the field strength of the signal or means for producing a control signal responsive to the field strength.

Regarding the rejections of Claims 3-14 under 35 U.S.C. § 112, first paragraph, the Examiner has stated that, "It is unclear how the receiver (such as a Polar heart rate monitor) can determine the intensity of the signal." In response, Applicant does not claim that such a receiver can, in itself, determine field strength, but has simply stated that the transmitter and receiver portions of a heart rate monitor such as a Polar monitor are examples of such transmitting and receiving means which are well known to those of ordinary skill (see the present application, page 4 at lines 11-19). The Examiner has also inquired as to "what structure has been added to the receiver to permit it to recognize different signal strengths?" The added structure includes signal modification circuitry 33 and microprocessor 34 as shown in FIGURE 3 and discussed in the

present application, lines 5-10 and 19-31. Moreover, Applicant submitted the declaration under Section 1.132 of Simo Maenpaa, an expert in the field of electromagnetics, in connection with his response to the Office Action dated June 3, 2003 herein. In that declaration, Mr. Maenpaa states, inter alia, that in his opinion the disclosure in the application would be sufficient to enable one of ordinary skill in the art to make and use the subject invention. On the possibility that the Examiner did not receive that declaration, a supplemental copy of it is enclosed herewith. Accordingly, the Applicant again contends based on the application itself and Mr. Maenpaa's declaration that the disclosure is adequate to permit one of ordinary skill to make and use the subject invention and request that the Examiner reconsider his rejection.


In summary, the Applicant believes that none of the references cited by the Examiner, either singularly or in combination, disclose or suggest the invention now claimed and that the invention is patentable over all prior art cited by the Examiner or known to the Applicant. Accordingly, the Applicant requests that the Examiner re-examine this application in view of the above amendments and remarks, withdraw all rejections and objections of record, and allow each of the claims now proposed.

In the event additional fees are due as a result of this amendment, payment for those fees has been enclosed in the form of a check. Should further payment be required to cover such fees you are hereby authorized to charge such payment to Deposit Account No. 501050.

DATED this 24th day of November, 2004.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence (together with all attachments and enclosures) is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: 24 November 2004


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